

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND

PROPOSED APPROPRIATION LANGUAGE

For necessary expenses in carrying out uranium enrichment facility decontamination and decommissioning, remedial actions and other activities of title II of the Atomic Energy Act of 1954 and title X, subtitle A of the Energy Policy Act of 1992, [\$220,200,000] \$277,000,000, to be derived from the Fund, to remain available until expended: Provided, That [\$40,000,000] \$35,000,000 of amounts derived from the Fund for such expenses shall be available in accordance with title X, subtitle A, of the Energy Policy Act of 1992. (*Energy and Water Development Appropriations Act, 1998.*)

EXPLANATION OF CHANGE

None.

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FY 1999 CONGRESSIONAL BUDGET REQUEST
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND
ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM MISSION

The Uranium Enrichment Decontamination and Decommissioning (UE D&D) fund was established by the Energy Policy Act of 1992 to carry out environmental management responsibilities at the nation's three gaseous diffusion plants. The three gaseous diffusion plants are located in the East Tennessee Technology Park (formerly the K-25 site), at Portsmouth, Ohio, and at Paducah, Kentucky. The Energy Policy Act also directs that the UE D&D Fund be used to reimburse licensees operating uranium or thorium processing sites for the costs of environmental cleanup at those sites, subject to a site specific reimbursement limit.

The goal of the EM program is to clean up as many of sites as possible by FY 2006. With current technologies and funding scenarios, however, it may not be possible to meet this goal for the larger, more complex sites. Where possible, the EM program plans to use new technologies being developed by the EM Science and Technology programs to accelerate the cleanup of these large facilities. After completion of cleanup, it will be necessary for EM to maintain a presence at most sites to monitor the areas after cleanup and provide information on the contained residual contamination. These activities will be necessary to ensure that the reduction in risk to human health is maintained. Such long-term stewardship will include passive or active controls and, often, treatment of groundwater over a long period of time. The extent of long-term stewardship required at a site will reflect the end state developed in consultation among DOE and other representatives of the Administration, Congress, representatives of regulatory agencies and state and local authorities, representatives of non-governmental organizations, and interested members of the general public.

The FY 1999 request for this activity is \$277,000,000. This is an increase of \$56,800,000 from the FY 1998 appropriation of \$220,200,000. This increase supports facility decommissioning activities at the East Tennessee Technology Park.

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PROGRAM FUNDING PROFILE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Remedial Action/Release Sites	\$ 94,930	\$79,855	\$100,539
Facility Decommissioning	41,532	50,344	85,147
Landlord	11,203	6,364	9,110
Long-Term Monitoring	0	12,503	15,531
Program Support	28,535	31,134	31,673
Ur/Th Reimbursement	<u>34,000</u>	<u>40,000</u>	<u>35,000</u>
 TOTAL, UE D&D Fund	 <u>\$210,200</u>	 <u>\$220,200</u>	 <u>\$277,000</u>

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PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
OAK RIDGE OPERATIONS OFFICE			
East Tennessee Technology Park (ETTP)	\$64,351	\$69,054	\$117,272
Oak Ridge Operations Office	28,535	3,561	3,637
Oak Ridge Reservation	0	19,029	19,348
Paducah Gaseous Diffusion Plant	37,458	43,054	55,235
Portsmouth Gaseous Diffusion Plant	<u>45,856</u>	<u>45,502</u>	<u>46,508</u>
Subtotal, OAK RIDGE	\$176,200	\$180,200	\$242,000
MULTI-SITE			
Uranium/Thorium Reimbursement	\$34,000	\$40,000	\$35,000
TOTAL D&D FUND	<u>\$210,200</u>	<u>\$220,200</u>	<u>\$277,000</u>

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ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

OAK RIDGE

I. Mission Supporting Goals and Objectives

MISSION

The Uranium Enrichment Decontamination and Decommissioning (UE D&D) fund was established by the Energy Policy Act of 1992 to support environmental management responsibilities at the nation's three gaseous diffusion plants. The three gaseous diffusion plants are located in Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. The Oak Ridge Operations Office directs and monitors the environmental management activities at all three plants.

The gaseous diffusion plants are used to "enrich" uranium by increasing the proportion of the preferred uranium isotope (U-235) relative to the more abundant but less fissionable isotope (U-238). The historical mission of the gaseous diffusion plants has been to enrich uranium for the Department's atomic weapons activities as well as for commercial nuclear power plants. The East Tennessee Technology Park (ETTP), formerly called the K-25 Site, was permanently shutdown in 1989; the Portsmouth and Paducah gaseous diffusion plants remain in operation and are leased by the Department of Energy to the United States Enrichment Corporation.

The gaseous diffusion plant buildings are enormous; for example, the five main buildings in Oak Ridge include 300 acres of floor space. The primary contaminants include uranium, technetium, and organic industrial chemicals. The process equipment in these buildings includes thousands of tons of valuable metals that can be cleaned and recycled for nuclear and non-nuclear applications.

D&D FUND - OAK RIDGE (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

2006 STRATEGIES

The United States Enrichment Corporation continues to operate the Portsmouth and Paducah plants. Therefore, the Department will continue ongoing remedial actions to prevent the spread of existing contamination, and waste management activities to address legacy wastes at the sites. Ongoing remedial actions and waste management activities will be completed at Portsmouth by FY 2006. Most ongoing remedial action and waste management will be completed at Paducah by FY 2006.

Comprehensive decontamination and decommissioning and cleanup of these sites cannot be initiated until the privatized United States Enrichment Corporation terminates the leases on the two plants. The East Tennessee Technology Park is shutdown, and the focus is on cleanup followed by re-use of the facilities by private sector firms. The site's name has been changed to the East Tennessee Technology Park to reflect the reindustrialization emphasis. A contract was awarded in FY 1997 to initiate decommissioning of the large process buildings; three of the five process buildings will be decommissioned by FY 2006 for re-use.

FY 1999 PROGRAM

The Fiscal Year 1999 Program includes remedial actions and ongoing waste management activities at all three gaseous diffusion plants. In addition, significant decommissioning is under way at the East Tennessee Technology Park (ETTP). Remedial actions will limit the future spread of contamination, waste management will remove legacy waste, and decommissioning will disposition process buildings and ancillary buildings on the site. Decommissioning at the ETTP will be followed by reindustrialization in space that is suitable for private sector leasing.

Cleanup challenges reflect the significant amount of legacy wastes, the size and physical condition of the processing facilities and the aerial extent of soil and groundwater contamination. For example, the Paducah groundwater plumes contain one of the largest volumes of off-site contamination in the Department of Energy complex.

Significant progress has been made to date in removing hazardous materials, addressing the source of contaminant plumes, facility decontamination for beneficial reuse, demolition of unusable structures and the treatment or disposal of legacy wastes.

D&D FUND - OAK RIDGE (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

The current cost estimate has been significantly reduced, from \$15,530,000,000 (1995 BEMR) to \$10,720,000,000, reflecting the reindustrialization strategy, the comprehensive “watershed” remediation approach and improvements in project management and contracting.

COMPLIANCE DRIVERS

Environmental Management Program activities at the East Tennessee Technology Park are governed by a tri-party Federal Facilities Agreement with the U.S. Environmental Protection Agency Region IV and the State of Tennessee, Toxic Substances Control Act (TSCA), and the Resource Conservation and Recovery Act (RCRA).

Activities at the Paducah site are governed by Resource Conservation and Recovery Act/Hazardous Solid Waste Amendment permit, a Comprehensive Environmental Response, Compensation, and Liability Act Consent Order, and the Toxic Substance Control Act. Paducah’s Federal Facilities Agreement is being finalized.

Activities at Portsmouth are governed by a Consent Decree with the State of Ohio, an Administrative Order by consent with the U.S. Environmental Protection Agency Region IV, and the Toxic Substances Control Act.

All of the agreements that govern work under the UE D&D Fund contain some flexibility for annual negotiation of specific milestones. The Department expects to achieve compliance in FY 1999 through substantive negotiations with the relevant regulatory bodies.

D&D FUND - OAK RIDGE (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 94,930	\$ 79,855	\$ 100,539	\$ +20,684	+26%
Facility Decommissioning	41,532	50,344	85,147	+34,803	+69%
Landlord	11,203	6,364	9,110	+2,746	+43%
Long-Term Monitoring	0	12,503	15,531	+3,028	+24%
Program Support	<u>28,535</u>	<u>31,134</u>	<u>31,673</u>	<u>+539</u>	<u>+2%</u>
 TOTAL, Oak Ridge	 <u>\$176,200</u>	 <u>\$180,200</u>	 <u>\$242,000</u>	 <u>\$+61,800</u>	 <u>+34%</u>

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u>			
Carry out activities at the East Tennessee Technology Park (ETTP) watershed including removal of hazardous materials, treatment, and disposal of remediation waste, source control/elimination to preclude the additional spread of contamination and remediation of soils, groundwater, and building structures to industrial use standards. [OR-44301]	\$13,150	\$13,357	\$23,542
• In FY 1997:			
- Completed the K-1417 /1419 RCRA Closure. This project was done for RCRA compliance.			
- Continued waste shipments in accordance with the Consent Decree issued by the Tennessee Commissioner of Environment.			
- Continued the planning and scoping of the ETTP site-wide Record of Decision (ROD).			
- Submitted the Remedial Investigation Work Plan for regulatory review. This project will address data collection needs for all sites within the boundaries of the ETTP.			
- Continued the remedial investigation of the K-1070-A Contaminated Burial Ground and prepared the proposed plan. This project will address a site where mixed low-level waste were disposed in the 1960's and 1970's and a groundwater plume now emanates from this site. Excavation of the wastes will result in remediation of the plume source.			
- Initiated the project K-1070-C/D Trenches and Mitchell Branch Plumes. This project is being conducted to intercept a groundwater contaminant plume that is flowing into a stream on-site. This stream flows into Poplar Creek, a navigable waterway that bisects the ETTP. The subproject includes design and construction of a french drain at the leading down gradient edge of two of the biggest groundwater contaminant plumes at the ETTP.			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the East Tennessee Technology Park (ETTP) (cont'd)

- In FY 1997: (cont'd)
 - A public meeting was held to discuss the ETTP Ponds project and associated decision documents. The actions directed by the State of Tennessee are to remove fish from the ponds, drain the ponds, and sample sediment in the pond bottom in order to determine if it poses a risk to humans or the environment. Design specifications and workplans were prepared and submitted to regulatory authorities and field work on one of the two ponds was started.
 - Started the K-1401 and K-1420 Sumps. This early action project will collect contaminated groundwater in the sumps of the K-1401 and K-1420 Buildings, pipe it to the site's industrial waste water treatment facility and treat it before it reaches an exposure point, in order to reduce risk to humans and the environment posed by the contaminated groundwater. This will prevent contaminated groundwater from being discharged to a storm drain, and eventually to a creek that bisects the ETTP.
 - Continued the K-1070-C/D G-pit and Concrete Pad subproject. This subproject will implement the remedial method proposed in the Record of Decision for this project which was re-submitted for public review in July 1997. The proposed alternative to address the material contaminated with solvents and uranium, included excavation of the source material and storing it in an appropriate facility.
 - Prepared and submitted the K-1070-A Contaminated Burial Ground subproject Feasibility Study for regulatory review (FS) and prepared the Proposed Plan. The remedial alternative recommended is excavation of the wastes including uranium and thorium in the burial ground, which will be implemented in subsequent years.
 - Used the transport area vitrification system to treat 80,000 kg of mixed waste sludge, and shipped 1.4 M kg of unstabilized pond waste to Envirocare of Utah for disposal.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the East Tennessee Technology Park (ETTP) (cont'd)

- In FY 1997: (cont'd)
 - Continued the Unstabilized Ponds Waste Disposal in accordance with the consent decree issued by the Tennessee Commissioner of the Environment. These two projects are being conducted in order to comply with the requirements of RCRA.
- In FY 1998:
 - Continue field work on the K-1070-C/D G-pit and Concrete Pad.
 - Submit the Feasibility Study for the K-1070-A Contaminated Burial Ground for approval and submit the Proposed Plan and the Record of Decision for regulatory review.
 - Start the field work for the ETTP Site-wide Record of Decision.
 - Complete project K-1401 and K-1420 Sumps.
 - Continue construction on the K-1070-C/D and Mitchell Branch Plumes and the ETTP Ponds.
 - Start the RCRA Closure of the K-1417-B Drum Storage Yard, an area of 3 acres where hazardous wastes were previously stored.
 - Continue the Unstabilized Ponds Waste Disposal in accordance with the consent decree issued by the Tennessee Commissioner of the Environment. Ship 1.4 Mkg of unstabilized pond waste to Envirocare of Utah for disposal.
 - Continue the Stabilized Pond Waste Disposal, to ensure that drums of wastes mixed with grout for stabilization are shipped to an out-of-state permitted disposal facility. Ship 350 gallon drums of stabilized pond sludge to Envirocare of Utah for disposal.
 - Continue remedial action surveillance and maintenance ensuring that all release sites for which remedial actions have yet to take place are maintained in a safe and compliant manner.
 - Continue treatment of mixed waste by vitrification.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the East Tennessee Technology Park (ETTP) (cont'd)

- In FY 1999:
 - Complete the K-1070-C/D Trenches and Mitchell Branch Plumes.
 - Complete ETTP Ponds.
 - Complete K-1417 B-Drum storage yard.
 - Begin legacy container disposition initiative that includes sorting, segregating and proper disposition of several container types and of various kinds of wastes.
 - Continue construction activities associated with the planned remedial alternative at the K 1070-CD G Pit and concrete pad.
 - Start remedial action construction at the K-1070-A Contaminated Burial Ground.
 - Continue Remedial Action surveillance and maintenance.
 - Continue treatment of mixed waste by vitrification.

Performance Summary Metrics

<u>ETTP</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
Release Site Assessments	18	1	3
Release Site Cleanups	3	4	6
Deactivations *	*	*	*
D&D Assessments	41	8	0
D&D Completions **	36	1	0

* The ETTP site has not taken credit for deactivations completed.

** At the K-33 building, three (10 cells each) cascade enrichment unit decommissionings will be completed in FY 1999, but they are not counted as separate D&D completions. All decommissioning at K-33 will be completed and the facility will be available for industrial reuse in FY 2000.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out remedial action activities at the Paducah Gaseous Diffusion Plant to address hazardous/solid waste units and reduce the public risk due to extensive groundwater contamination (technetium, trichloroethene). The Paducah groundwater plumes contain one of the largest volumes of off-site contamination in the Department of Energy complex. The cleanup approach is to address potential public risks through source control, plume mitigation, and groundwater treatment. [OR-45301]	\$19,195	\$18,326	\$21,350
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Submitted Waste Area Grouping (WAG) 15 Site Evaluation Report to regulatory agencies and received No Further Action (NFA) approval from regulators. - Submitted ROD for WAGs 1 and 7 and Remedial Design Report. - Established regulator approval of background radionuclide and metals concentrations in soils to guide cleanup levels. - Submitted Engineering Evaluation/Corrective Action (EE/CA) for polychlorinated biphenyl (PCB) removal action for WAG 23; Submit WAG 28 Remedial Investigation/ Feasibility Study Work Plan to regulatory agencies. - Submitted WAG 22 Solid Waste Management Unit (SWMU) 7 and 30 Remedial Investigation Reports to regulatory agencies. - Issued Independent Professional Engineer's Certification Report for C-400-C Nickel Stripper and C-409 Hazardous Waste Pilot Plant. - Submitted WAG 27 RI/FS Work Plan to regulatory agencies. - Submitted WAG 6 Treatability Study Program Plan to regulatory agencies. - Completed construction, of the Northeast Plume Containment System and submitted the Operations and Maintenance Plan to regulatory agencies for approval to begin operations; - Initiated testing, and submitted the Post Construction Report of Northeast Plume Containment System to halt the spread of contamination. 			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out remedial action activities at the Paducah Gaseous Diffusion Plant

- In FY 1997: (cont'd)
 - Submitted WAG 22, SWMU 2 Preliminary Characterization Summary Report to regulatory agencies.
 - Submitted WAG 9 and 11 Site Evaluation Work Plans and Site Evaluation Reports.
 - Initiated transfer of up to 34 fluorine cells (equipment) from the C-410 Complex to Department of Defense.
 - Continued provision of water to residents north of the Plant and residential well monitoring.
 - Successfully demonstrated membrane technology to treat groundwater contaminated with Technetium-99 (Tc-99).
 - Successfully demonstrated electro-osmosis to remedy solvent contaminated soil.
- In FY 1998:
 - Submit ROD for WAG 17 to obtain No Further Action agreement.
 - Submit ROD for LASAGNA soil cleanup technology.
 - Submit WAG 22, SWMU 2 Feasibility Study (FS) and Proposed Plan.
 - Submit WAG 3 RI/FS Work Plan to the regulatory agencies.
 - Submit Postconstruction Report for WAGs 1 and 7.
 - Submit WAG 22, SWMU 7 and 30 Feasibility Study Report to regulatory agencies and Proposed Plan.
 - Submit WAG 6 RI Report to the regulatory agencies.
 - Issue Site Evaluation Report for WAGs 9&11 to regulators.
 - Continue provision of water to residents north of the Plant and residential well monitoring.
 - Implement inorganic membrane technology to treat groundwater.
 - Use electro-osmosis technology to treat soil.
 - Implement vapor extraction oxidation and surfactant treatment of groundwater.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

Remedial Action/Release Sites (cont'd)

FY 1997

FY 1998

FY 1999

Carry out remedial action activities at the Paducah Gaseous Diffusion Plant (cont'd)

- In FY 1999:
 - Initiate field work for WAG 3 RI/FS.
 - Submit ROD for WAG 22, SWMUs 7&30.
 - Submit ROD for WAG 22, SWMU 2.
 - Submit WAG 27 FS to regulatory agencies.
 - Submit WAG 28 Remedial Investigation Report.
 - Submit FS Report and Proposed Plan for WAG 6.
 - Submit Remedial Design Report for LASAGNA Technology.
 - Implement deployment of LASAGNA technology.
 - Continue inorganic membrane technology to treat groundwater.
 - Continue electro-osmosis soil treatment.
 - Continue vapor extraction oxidation and surfactant treatment of groundwater.

Carry out waste management activities at the Paducah Gaseous Diffusion Plant

[OR-45302]

\$16,783

\$16,284

\$21,628

- In FY 1997:
 - Characterized over 10,000 drums of waste for the Vortec Vitrification Technology Demonstration.
 - Completed the 44 Sampling and Analyses Plans and Toxicity, Characteristic Leaching Procedure (TCLP) characterization of 3,435 drums (cumulative total 47 percent complete) as required by the TCLP Federal Facility Compliance Act (FFCA).
 - Completed 24 characterization events (46 percent of Land Disposal Restricted (LDR) inventory) for the LDR FFCA FFCA-Site Treatment Plan (STP).
 - Disposed of between 3,000-4,000 tons of solid waste in the C-746-U landfill.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out waste management activities at the Paducah Gaseous Diffusion Plant (cont'd)

- In FY 1997: (cont'd)
 - Disposed of off-site over 21,000 pounds (3 percent) of RCRA waste and 90,000 pounds (1.2 percent) of Low-Level Waste (LLW).
 - Continued on-site treatment of Toxic Substances Control Act (TSCA)/RCRA wastewater.
 - Disposed of approximately 7,300 containers (15 percent) of current inventory of containerized waste in the C-746-U landfill.
 - Demonstrated photocatalytic conversion technology of wastewater contaminated with organics.
 - Treated PCBs in sediments using micro-organisms.
- In FY 1998:
 - Continue characterizing of drums of waste for the Vortec Technology Demonstration.
 - Dispose of off-site over 50,000 pounds (6 percent) of RCRA waste, 190,000 pounds (depleted current inventory of liquid waste that could be treated by TSCA incinerator) of TSCA/RCRA liquid waste, and 60,000 pounds (1 percent) of LLW.
 - Complete characterization of LDR mixed waste required by the LDR FFCAct-STP.
 - Dispose of over 8,000 cubic yards of waste in the C-746-U landfill.
 - Continue on-site treatment of TSCA/RCRA wastewater.
 - Complete TCLP characterization of 2,966 drums (cumulative total 72 percent complete) as required by the TCLP FFCAct.
 - Complete Vortec vitrification treatment of 2,500 waste drums (5 percent of current waste inventory) during demonstration period.
 - Treat PCBs in sediments using micro-organisms.
 - Implement photocatalytic conversion technology of wastewater contaminated with organics.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out waste management activities at the Paducah Gaseous Diffusion Plant (cont'd)

- In FY 1999:
 - Continue off-site disposal of RCRA, TSCA and LLW.
 - Continue on-site treatment of TSCA/RCRA wastewater.
 - Continue characterization of drums for the Vortec Vitrification Process (approximately 24,000 drums).
 - Complete the TCLP FFCA requirements.
 - Continue treatability studies and treatment of LDR mixed waste streams required by the LDR FFCA/FFCAct-Site Treatment Plan.
 - Complete Vortec demonstration treatment of 25,500 waste drums (48 percent of current waste inventory).
 - Continue photocatalytic conversion of wastewater contaminated with organics.

Performance Summary Metrics

<u>Paducah</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
Release Site Assessments	43	9	16
Release Site Cleanups	22	23	13

* Deactivation and Decommissioning will be initiated after. USEC terminates its lease of the site.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out remedial action activities at the Portsmouth Gaseous Diffusion Plant to address hazardous/solid waste units and on-site groundwater contamination (primarily trichloroethene). Cleanup activities are prioritized using a risk-based system. This approach includes closure of RCRA hazardous waste units, contain groundwater plumes on-site, address the source of contamination, and treatment or disposal of legacy waste.			
[OR-46301]	\$22,423	\$10,492	\$15,573
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Received regulatory approval of the Peter Kiewit Landfill Corrective Measure Study (CMS). - Completed the Peter Kiewit landfill design and initial construction. - Submitted the Final X-749/120 CMS Report to regulatory agencies. - Completed the X-231A Dense Non Aqueous Phase Liquid (DNAPL) Treatability Study. - Submitted all Quadrant Final RFI reports to regulatory agencies. - Completed the West Drainage Ditch Risk Reduction Action, which entailed removal of isolated areas of soil contamination. - Initiate solvent removal from groundwater using peroxides, bio-surfactant, lime slurry, and potassium permanganates. • In FY 1998: <ul style="list-style-type: none"> - Receive regulatory approval of the X-749/X-120 CMS. - Receive regulatory approval of the CMS reports for Quadrant I, II, and III. - Complete the interim removal action in the East Drainage System. - Complete the survey of the North Drainage Ditches and initiate removal of radiologically contaminated areas identified in the survey. - Complete the multi-layer cap on the Peter Kiewit Landfill (phase I of Corrective Measures Investigation (CMI)). 			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out remedial action activities at the Portsmouth Gaseous Diffusion Plant (cont'd)

- In FY 1998: (cont'd)
 - Supplemental Environmental Project: Complete the disposal of \$1 million of low-level waste to comply with an agreement with Region V, EPA.
 - Continue solvent removal from groundwater using peroxides, bio-surfactant, lime slurry, and potassium permanganates.
- In FY 1999:
 - Receive the regulatory approval of CMS reports for Quadrant IV and X-701B.
 - Complete the removal of radiologically contaminated areas in the North Drainage Ditches.
 - Initiate design for the X-749/X-120 CMI.
 - Initiate the design for the 5-Unit IRM conversion to passive treatment.
 - Complete the design of the 5-Unit Groundwater CMI.
 - Initiate the conversion of Peter Kiewit Landfill seep system to passive treatment.
 - Complete the interim removal action for X-701B soil.
 - Initiate the shutdown of the X-622T Groundwater Pump and Treat System (GWPT).
 - Complete the interim removal action at X-633.
 - Continue solvent removal from groundwater using peroxides, bio-surfactant, lime slurry, and potassium permanganates.
 - Complete the source investigation at east end of the Process Waste Lines from X-705.
 - Complete the design for the X-734 Landfill CMI.
 - Complete the process upgrade for X-623 GWPT.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out waste management activities at the Portsmouth Gaseous Diffusion Plant [OR-46302]	\$23,379	\$21,396	\$18,446
• In FY 1997:			
- Shipped 150,000 pounds of liquid waste to the TSCA Incinerator.			
- Submitted the Site Treatment Plan Annual Report.			
- Characterized 4 waste streams.			
- Shipped 500,000 pounds of PCB articles off-site.			
- Prepared, transported and disposed of 1,700,000 lbs of X-701B Sludge, 1,300,000 lbs of X-701B Soils, 136,000 lbs of X-750 Soils, and 140,000 lbs of X-752 Soils.			
- Treated 130,000 lbs waste water at the on-site waste water treatment facility.			
- Disposed of treated 140,000 lbs microfiltration sludge off-site.			
- Treated and disposed of 19,000 oil and grease filter cake and recycle 200,000 lbs of lead acid batteries.			
- Initiated design of X-735 Sanitary Landfill closure cap.			
• In FY 1998:			
- Cap the X-735 Sanitary Landfill.			
- Treat 240,000 lbs of bulk TSCA liquid off-site.			
- Treat 130,000 lbs waste water at the on-site waste water treatment facility.			
- Characterize 19 waste streams.			
- Dispose of 9,100 lbs of mixed waste off-site.			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out waste management activities at the Portsmouth Gaseous Diffusion Plant (cont'd)

- In FY 1999:
 - Treat the remainder of bulk TSCA liquid stored on-site (approx 240,000 lbs).
 - Treat 130,000 lbs of waste water at the on-site waste water treatment facility.
 - Treat approximately 364,200 lbs of mixed waste.
 - Characterize 28 waste streams.
 - Complete the certification of the X-735 landfill closure.

Performance Summary Metrics

<u>Portsmouth</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
Release Site Assessments	2	0	21
Release Site Cleanups	3	1	8

* Deactivation and Decommissioning will be initiated after USEC terminates its lease of the site.

Subtotal, Remedial Action/Release Sites

\$94,930

\$79,855

\$100,539

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u>			
Facility decommissioning at the East Tennessee Technology Park (ETTP) will maximize beneficial reuse of the facilities. Elements of this "reindustrialization" strategy include removal of hazardous materials, treatment and disposal of legacy waste, source control/elimination to preclude the additional spread of contamination and remediation of soils, groundwater, and building structures to industrial use standards.			
Carry out decommissioning activities at the East Tennessee Technology Park [OR-44303]	\$11,300	\$12,769	\$9,777
• In FY 1997:			
- Completed the K-25 Cooling Towers Demolition project, demolishing 34 inactive facilities. These facilities were related to the cooling water system for the uranium enrichment process facilities.			
- Completed the Small Scale Metal Recycle Program. Over 900 containers have been fabricated and delivered using metals recycled from the shut down uranium enrichment process equipment.			
- Completed the assessment and issued the Action Memorandum for the Group I Building Demolition Project to document the decision to demolish five radioactively-contaminated Group I auxiliary facilities as a non-time critical removal action under CERCLA.			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Facility Decommissioning (cont'd)

Carry out decommissioning activities at the East Tennessee Technology Park (cont'd)

- In FY 1997: (cont'd)
 - Initiated the assessment and issued the Engineering Evaluation/Cost Analysis on the K-1420 decontamination facility which will be done as a non-time critical removal action under CERCLA. A request for proposal will also be issued to determine if the K-1420 building has a reuse potential.
 - Removed four large uranium deposits from the K-25 and K-29 buildings that were criticality safety concerns and were part of a response action to DNFSB Recommendation 94-1 as a part of the deposit removal project.
- In FY 1998:
 - Complete deposit removal work in the K-25 building by removing an additional 7 large deposits of highly enriched uranium.
 - Remove two large low-enriched uranium deposits from the K-29 building.
 - Complete the K-1420 assessment with the issuance of the Action Memorandum to document the decision for cleanup of the facility as a non-time critical removal action under CERCLA.
 - Begin cleanup on K-1420 with the award of a cleanup contract.
 - Begin the K-25 Auxiliary Facilities Demolition (KAFaD) Facilities Group 1 Building Demolition project on K-1131, the feed and tails buildings, which is highly contaminated and extensively deteriorated. Two of these facilities are publicly accessible, and the other three (including K-1131) are on the banks of Poplar Creek, a navigable waterway that bisects the ETP.

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out decommissioning activities at the East Tennessee Technology Park (cont'd)			
• In FY 1999:			
- Complete the demolition on K-1131 and K-725 buildings, the two most deteriorated buildings in the KAFaD Group 1 Building Demolition Project. The Group I Project is a CERCLA removal action with a FFA milestone driven schedule.			
- Begin demolition on the remaining three buildings in the Group I scope.			
- Continue cleanup on K-1420 under a CERCLA removal action.			
Carry out Process Equipment D&D activities at the East Tennessee Technology Park [OR-44302]			
	\$ 6,346	\$17,200	\$46,000
• In FY 1997:			
- Awarded a prime contract (fixed-price) to British Nuclear Fuels Ltd. (BNFL) for completion of the D&D of three of the five GDP buildings and related process equipment (buildings K-29, K-31 and K-33).			
• In FY 1998:			
- Complete (1) mobilization; (2) completion of all detailed project plans; (3) site preparation; and (4) prime contractor's hiring and training of work force.			
- Complete the removal of equipment and cleanup of eight cells [10 percent complete] (first cascade enrichment unit for Building K-33); begin (50 percent complete) the construction of a D&D workshop area inside the K-33 first unit to use in cleaning process equipment.			
• In FY 1999:			
- Complete the construction of the D&D workshop; and complete the equipment removal and cleanup of 22 cells [38 percent complete] (first, second, and third of the eight cascade enrichment units of building K-33, each "unit" contains 10 enrichment cells).			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out Facility Safety Upgrades at the ETPP	\$0	\$0	\$9,000
<ul style="list-style-type: none"> • In FY 1997 and FY 1998: <ul style="list-style-type: none"> - No activity. • In FY 1999: <ul style="list-style-type: none"> - Implement Corrective action plan to address risk threats identified in a 1997 Environmental, Safety and Health (EH) Site Review; perform risk reduction activities including special corrective maintenance, facility deactivation, and decommissioning activities at K-1401, K-1420, K-1200 Complex, K-1037, and other buildings identified during periodic site assessments. 			
Carry out facility support functions for the ETPP [OR-44303]	\$22,352	\$19,611	\$19,130
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued routine S&M, which includes facility surveillance of 122 major shutdown facilities with 13,000,000 square feet of floor area, to identify unacceptable environment, safety, and health conditions such as fallen asbestos or PCB leaks and to maintain security checks on special nuclear materials, facility maintenance to fix unacceptable ES&H conditions and maintain utility systems. - Completed correction of hazardous material leaks, support of criticality alarms, fire protection systems, and facility security, and management of hazardous materials. - Continued several stabilization projects, including removal of legacy compressed gas cylinders. - Disposed of repxoxy resins, of 500 ST-5 waste containers, and consolidation of accountable fissile material from four fissile storage areas into one fissile storage area. • In FY 1998: <ul style="list-style-type: none"> - Continue routine S&M, including facility surveillances of 119 major shutdown facilities with 8,000,000 square feet of floor area. Begin implementation of surveillance and maintenance improvement actions in response to EH findings from FY 1997. 			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out activities for the ETTP (cont'd)			
• In FY 1999:			
- Continue routine S&M for 119 major facilities. Continue implementation of surveillance and maintenance improvement actions in response to EH findings from FY 1997.			
Conduct predecommissioning surveillance and maintenance at Portsmouth.	\$54	\$114	\$113
Conduct predecommissioning surveillance and maintenance at Paduchah.	\$1,480	\$650	\$1,127
Subtotal, Facility Decommissioning	<u>\$41,532</u>	<u>\$50,344</u>	<u>\$85,147</u>

Landlord

Carry out landlord infrastructure support activities at the East Tennessee Technology Park [OR-44101]	\$11,203	\$6,117	\$8,849
• In FY 1997:			
- Completed design for K-1250-4, Vehicle Bridge Replacement, K-732 Switchyard Reconfiguration design, K-1401 Reroof design.			
- Completed Heating Ventilation and Air Conditioning (HVAC) upgrades for K-1006 and K-1037.			
- Completed ETTP Records Management Consolidation task, Phase I.			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u>			
Carry out landlord activities at the East Tennessee Technology Park (cont'd)			
• In FY 1997: (cont'd)			
- Completed construction activities for K-1650 Reroof, K-1650 Backup Power Upgrade, K-1501 Precipitator Asbestos, K-802 Firewater Pump, and K-1037 Asbestos Removal.			
- Completed other construction and equipment tasks.			
• In FY 1998:			
- Complete procurement and construction activities associated with the repairs on the K-1037 roof.			
- Complete construction activities for K-1250-4 Vehicle Bridge Replacement, Electrical Distribution System critical feeder replacement, K-1206 Firewater Tank Internal Phase I refurbishment.			
- Completion of other design, construction activities, and equipment tasks.			
• In FY 1999:			
- Will complete the Storm Drain Structural Rehabilitation survey, Phase I.			
- Will initiate and complete design, procurement and construction activities on the K-1250-3 and K-1250-2 Vehicle Bridge Refurbishment.			
- Will complete the leasing of 10 percent of available buildings at the ETTP.			
- Will complete the K-1206 Firewater Tank Phase II refurbishment.			
- Will initiate and complete other construction and equipment tasks.			
Support Intergovernmental and Stakeholder functions through AIP and Federal Facility Agreement (FFA) for Paducah and OR-Direct.			
• In FY 1998 and FY 1999, support the above outreach/stakeholder activities.	\$0	\$247	\$261
Subtotal, Landlord	\$11,203	\$6,364	\$9,110

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Long-Term Monitoring</u>			
Conduct ETTP Long-Term Surveillance and Maintenance	\$0	\$0	\$974
• In FY 1999:			
- Initiate long-term surveillance and maintenance to assume post-construction monitoring and surveillance of areas remediated under CERCLA or closed under RCRA.			
Conduct Paducah Long-Term Surveillance and Maintenance	\$0	\$2,497	\$5,779
• In FY 1998 and FY 1999:			
- Continue surveillance and maintenance functions at areas where interim remedial actions have been completed.			
Conduct Portsmouth Long-Term Surveillance and Maintenance	\$0	\$10,006	\$8,778
• In FY 1998 and FY 1999:			
- Continue surveillance and maintenance at completed remedial action sites.			
Subtotal, Long-Term Monitoring	<u>\$0</u>	<u>\$12,503</u>	<u>\$15,531</u>
<u>Program Support</u>			
Conduct Oak Ridge Directed Support	\$28,535	\$22,483	\$22,875
• In FY 1997, FY 1998, and FY 1999:			
- Provide uranium enrichment portion of contract and program management and maintain the Oak Ridge Environmental Information System and other Federal Facility Agreement (FFA) data management functions.			

D&D FUND - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1998, and FY 1999: <ul style="list-style-type: none"> Provide uranium enrichment portion of contractor transition activities to support the orderly maintenance and transfer of management control and oversight responsibilities from the current M&O contract to the new M&I contract. [OR-48101] 			
Conduct Paducah Directed Support	\$0	\$5,157	\$5,200
<ul style="list-style-type: none"> In FY 1997, FY 1998, and FY 1999: <ul style="list-style-type: none"> Provide contract and program management for Paducah activities. 			
Conduct Portsmouth Directed Support	\$0	\$3,494	\$3,598
<ul style="list-style-type: none"> Provide contract and program management for remedial and waste management actions at Portsmouth. 			
Subtotal, Program Support	<u>\$28,535</u>	<u>\$31,134</u>	<u>\$31,673</u>
TOTAL, OAK RIDGE	<u>\$176,200</u>	<u>\$180,200</u>	<u>\$242,000</u>

D&D FUND - OAK RIDGE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Remedial Action/Release Sites: Increased field work necessary to complete ongoing cleanups of the ETTP Ponds, the Mitchell Branch Plumes, and the 1417 Drum Yard in FY 1999. +\$10,185

Initiate field work for WAG 3 RI/FS and complete remedial design and deployment of the LASAGNA technology. Initiate remedial designs for several 1998 ROD submittals, as well as submit 1999 RODs at Paducah. +\$3,024

Increase RCRA, TSCA, and LLW waste disposal volumes and completion of the demonstration phase of the VORTEC vitrification technology at Paducah. In addition, significant TCLP field activities will be initiated as laid out in the site FFA. +\$5,344

Increased remedial action costs at Portsmouth due to the field work to complete the interim removal actions of the X-701B soils and at the X-633 site. +\$5,081

The waste management activities at Portsmouth decrease due to significant waste management completions in FY 1998. -\$2,950

Facility Decommissioning: The completion of the deposit removal from building K-25 in FY 1998 results in a decrease in FY 1999. -\$2,992

The ETTP process equipment removal project was mobilized and initiated in FY 1998, and in FY 1999 Oak Ridge will take advantage of the FY 1998 preparatory work and will ramp up process equipment removal and decontamination. The D&D workshop will be completed and the removal of the first unit will be completed as well as removal of the second and third units in FY 1999. +\$28,800

The ETTP Facility Safety Upgrade will be initiated in FY 1999. This will include risk based decontamination, deactivation, maintenance, and decommissioning of high risk facilities at the ETTP, in response to EH site review in FY 1997. +\$9,000

D&D FUND - OAK RIDGE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Facility Decommissioning: (cont'd)

Overall surveillance and maintenance costs at the three gaseous diffusion plants are essentially unchanged. -\$5

Landlord: The ETTP increases are due to refurbishment of the K-1250-3, K-1250-2 bridges, and the 1206 firewater tank refurbishment. +\$2,746

Long-Term Monitoring: Long-term monitoring activities are initiated in FY 1999 at the ETTP. +\$974

Long-term surveillance and maintenance activities at Paducah are increased due to additional interim remedial action completions that require long-term surveillance and maintenance. +\$3,282

Long-term surveillance and maintenance requirements are reduced at Portsmouth due to conversion of the 5-Unit Interim remedial action and Peter Kiewit seep systems from active to passive operations. -\$1,228

Program Support: The Program Support activities did not change significantly between FY 1998 and FY 1999. The primary functions of program and contract management, as well as contractor planned transition activities, are planned at comparable funding levels. +\$539

Total Funding Change, Oak Ridge **+\$61,800**

UE D&D

MULTI-SITE ACTIVITIES

I. Mission Supporting Goals and Objectives:

MISSION

The Uranium Enrichment Decontamination and Decommissioning (UE D&D) fund supports partial payment of the Uranium/Thorium as required under Title X, Subtitle A of the Energy Policy Act of 1992. The Act directs that the fund be used to reimburse operating uranium or thorium processing site licensees for the costs of their environmental cleanup at those sites, subject to a specific reimbursement limit. This payment is to cover the Federal government's share of cleanup being carried out at active uranium and thorium processing sites. The Department compensates site owners on a per-ton basis for the restoration costs for those tailings attributable to the Federal government. Due to overall priorities within the UE D&D funds (i.e. compliance activities, high priority cleanup actions, etc.), the funding requested only covers a portion of the claims.

FY 1999 PROGRAM

The Uranium and Thorium Reimbursements will be distributed in May 1999 based on approved unpaid claims submitted through FY 1998. Reimbursements will be based on the review and audits of claims submitted by 13 uranium licensees and one thorium licensee.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Program Support.	<u>\$34,000</u>	<u>\$40,000</u>	<u>\$35,000</u>	<u>-5,000</u>	<u>-13%</u>
TOTAL, UE D&D	<u>\$34,000</u>	<u>\$40,000</u>	<u>\$35,000</u>	<u>\$ -5,000</u>	<u>-13%</u>

UE D&D - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

[PBS numbers are bracketed in the text]

Program Support [HQ-4000]

FY 1997 **FY 1998** **FY 1999**

\$34,000 \$40,000 \$35,000

- In FY 1997, FY 1998 and FY 1999:
 - Provided for partial payment of approved Uranium/Thorium (Title X) reimbursement claims.

Subtotal, Program Support

\$34,000 **\$40,000** **\$35,000**

TOTAL, HEADQUARTERS UE D&D

\$34,000 **\$40,000** **\$35,000**

Explanation of Funding Changes from FY 1998 to FY 1999:

Program Support: Decrease is due to less funding resources available for the partial payments to the Ur/Th licensees in order to support increased clean-up effort at Oak Ridge.

-\$5,000

Total Funding Change, Headquarters

-\$5,000